

C L A I M S

- 1     1.     A security system for controlling access to one or more  
2           application functions located on a server or accessible  
3           via server, each application function having an  
4           associated security level, wherein one or more clients  
5           communicate with said server by means of requests for  
6           accessing one of said application functions using a  
7           network, wherein access to said application functions is  
8           controlled by security requirements, comprising:  
  
9           an authentication component functionally separated from  
10          said clients and said application functions for  
11          processing said client request independently of said  
12          client type, containing more than one authentication  
13          mechanisms and selecting and executing an authentication  
14          mechanism from said more than one authentication  
15          mechanisms based on the information contained in the  
16          client request resulting in a security state;  
  
17          a security component containing a security policy  
18          describing security requirements (security level) for  
19          accessing application functions, comparing said security  
20          state associated with said client with the security level  
21          of the application function and allowing access to the  
22          application function if the security state fulfills the  
23          security level.  
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- 1     2.     A system according to claim 1, wherein said clients are  
2           PVC-devices.

3 3. A system according to claim 1, wherein said  
4 authentication component and said security component are  
5 integrated in one component stored on a server.

1 4. A system according to claim 1, whereby said  
2 authentication component consists of security plug-ins  
3 whereby each authentication mechanism is laid down in a  
4 separate security plug-in.

1 5. A system according to claim 4, whereby the authentication  
2 mechanism may be UserID/Password, Challenge/Response or  
3 digital signature.

1 6. A system according to 2 further comprising:  
2  
3 a component (ADL) for converting PVC-device specific  
4 requests into canonical requests before said request is  
5 used by said authentication component.

1 7. A method for controlling access to one or more  
2 application functions stored on a server or accessible  
3 via server, each application function having an  
4 associated security level, wherein one or more clients  
5 communicate with said server by means of requests for  
6 accessing one of said application functions using a  
7 network, whereby access to said application functions is  
8 controlled by a security requirements, comprising the  
9 steps of:

10 routing all incoming requests created by said clients to  
11 an authentication component which is functionally

independent from said clients and said application functions, said authentication component comprising the steps of:

authentication of said client by determining an authentication mechanism provided by said authentication component by means of authentication information contained in said request and applying said authentication mechanism;

storing a result of said authentication and said authentication information or parts of it contained in said request as a security state;

using security requirements for said one of said application functions to be accessed;

comparing said stored security state with said security requirements for accessing the requested application function ; and

invoking said requested application function if said security state fulfills said security requirements.

8. A method according to claim 7 wherein said incoming requests are canonical requests.

9. A method according to claim 8 wherein said canonical requests are created by a Device Adaptation Layer which converts client specific requests into canonical requests.

1 10. A method according to claim 7 comprising the further  
2 steps of:

3 creating a session identifier when establishing a  
4 communication between a client and a server and using  
5 said session identifier in all requests and responses  
6 between said client and said server.

1 11. A method according to claim 10 whereby said session  
2 identifier and said security state are placed in a  
3 cookie, whereby said cookie is inserted into each  
4 request and response between said client and said server.

1 12. A method according to claim 7 wherein said clients are  
2 PVC-devices.

1 13. A computer program comprising computer program code  
2 portions for performing respective steps of the method  
3 according to claim 7 to 12 when the program is executed  
4 in a computer.

1 14. A computer program product stored on a computer-readable  
2 media containing software code for performing of the  
3 method according to one of the claim 7 to 12 if the  
4 program product is executed on the computer.

1 15. A client-server system, wherein one or more clients,  
2 having client types, communicate with a server by means  
3 of requests for accessing application functions located  
4 on or accessible via said server, wherein access to said

5 application functions is controlled by a security system  
6 located on said server, wherein said security system  
7 comprises:

8 an authentication component, functionally separated from  
9 said one or more clients and said application functions  
10 for processing client requests independently of client  
11 type, containing one or more authentication mechanisms  
12 and selecting and executing an authentication mechanism  
13 from said authentication mechanisms based on the  
14 information contained in the client request, resulting in  
15 a security state;

16 a security component containing a security policy  
17 describing security requirements (security level) for  
18 accessing application functions, comparing said security  
19 state associated to a client with the security level of  
20 the application function and allowing access to the  
21 specified application function if the security state  
22 fulfills the security level.  
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